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AUTHOR Poresky, Robert H.; Hendrix, Charles
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ABSTRACT

These exploratory studies focused on child-pet bonding and the effect of the quality of children's home environments on the social development of preschoolers. Survey data from 88 parents regarding the parents, their homes, and their preschool child provided empirical support for the hypothesis that young children derive developmental benefits from their interactions with pets. Additional data from home interviews with some families provided further support for the general premise that there are developmental benefits to children from interacting with pets. Benefits were primarily in the social domain, and involved social competence, empathy, and attitudes towards pets. "Pet bonding" appeared to be a stronger determinant of pet-associated benefits than pet ownership. Other family elements, including Environmental Assessment Index measures of the quality of home environments, were associated with pet ownership and bonding and the children's development. Children with pets and children with better home environments had higher age-adjusted child development scores. Further research is recommended for the purposes of replicating these results and clarifying their complex linkage. (RH)

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# COMPANION ANIMAL BONDING, CHILDREN'S HOME ENVIRONMENTS, AND YOUNG CHILDREN'S SOCIAL DEVELOPMENT.

Robert H. Poresky and Charles Hendrix

Department of Human Development and Family Studies
312 Justin Hall
College of Human Ecology
Kansas State University
Manhattan, Kansas 66506

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## Abstract

This research focuses on (1) child-pet bonding, rather than just "pet ownership", and (2) the quality of children's home environments as they affect social development. There are a number of arguments for the importance of the child-animal bond for children's social development. Levinson (1978) concluded that "closeness to animals can reduce alienation" and that children's empathy, self-esteem, self-control and autonomy could be promoted by raising pets. A positive relationship between pet ownership and children's social sensitivity and interpersonal trust was reported by Hyde, Kurdek and Larson (1983). The quality of children's home environments, including the presence of animals, has been linked with both the concurrent and longitudinal cognitive development of preschool children (Bradley and Caldwell, 1984; Poresky, 1987).

Two key factors for this research on factors affecting young children's social development were (1) reaching beyond "pet ownership" to child-pet bonding as the operationalization of the companion animal bond, and (2) assessing the quality of the children's home environments. The Companion Animal Bonding Scale (Poresky, Hendrix, Mosier and Samuelson, 1987) and the Environmental Assessment Index (Poresky, 1987) were the key independent measures in these exploratory studies.

The first study was a parent survey (n = 88) of the 3-6 year old children's involvement with pets, their home environments and the effects of this involvement on the children. The parent survey included the above measures and our adaptation of the Denver Prescreening Developmental Questionnaire (Frankenberg, 1975), which attained a Cronbach Alpha coefficient of 0.85, and the Iowa Social Competency Scales (ISCS) (Preschool Form) (Pease, Clark, Crase, 1981). During the home visit study brief verbal vignettes with affective and cognitive probes of the child's perceptions were utilized to assess the children's empathy.

The child's companion animal bond and the quality of the child's home environment and their two-way interaction were associated with the children's age-adjusted performance on the adapted Denver Prescreening Developmental Questionnaire. Children with stronger bonds and higher home assessments had higher age-adjusted developmental scores.

The children's pet bond and home environments were associated with their parent's estimates of their social development. Their bonding scores were positively correlated with their "reassurance", "social activator", and inversely corelated with their "uncooperative" ISCS scores. The children with the stronger bonds also had significantly lower scores on the "hypersensitive" ISCS scale and higher "reassurance" scores than children with lesser bonds. Significant correlations were also found between the quality of the children's home environments and their "social activator", "hypersensitive", "reassurance" and the mothers' "social activator" ISCS factors. Their home ratings were non-significantly correlated with the empathy score and older children had higher higher empathy sub-scores.

These results are viewed as providing support for the hypothese that young children's social development is influenced by their relationship with a pet and the quality of their home environments.

Hypotheses:

1. Children who have a bond with a dog or cat show more maturity in their cognitive, moral and emotional development (e.g., decentration, responsibility, self-concept, empathy, attachment) than children who do not have such pets.

2. Children who have a more interactive relationship with their pet are more affected by that relationship than those with a more distant relationship.

3. Family environments which include dogs or cats facilitate children's development more than those without pets.

4. Companion animal effects on a child are directly affected by family relationships.

## Method

Parent survey instruments were used to collect data in the first study and home visit techniques were used in the second study.

Sample: Families with young children drawn from volunteers, K.S.U. Early Childhood Laboratory, Stone House Day Care Center, Blue Valley Nursery school, newspaper birth announcements, low income day care center, K.S.U. Cooperative Childcare Center. The children ranged from 3 to six years and their mothers age averaged about 34 years and their fathers age averaged 35 years. About half had a B.S. or more education. The mothers family types included 78% from the original intact family, 5% remarriages, and 17% single parent families. Ninety-eight percent of the fathers who responded were in their original marriage.

**Instruments:**
**The Pet Relationship scales included:**

(1) Companion Animal Bonding Scale
(Poresky, Hendrix, Mosier, Samuelson; 1987)

(2) Companion Animal Semantic Differential
(Poresky, Hendrix, Mosier, Samuelson; 1988)

**The Family Environment scales included:**

(1) Environmental Assessment Index (Poresky, 1987)

**Parent Survey Child Dvelopment Masures:**

1) The Denver Prescreening Developmental Questionnaire
(Frankenburg, 1975) – adapted and extended

2) Iowa Social Competency Scales (Pease, Clark and Crase (1981).

**Home Visit Child Development Measures:**

1) Empathy - Child and Pet Vignettes

2) The Peabody Picture Vocabulary Test - Revised
(Dunn and Dunn, 1981)

## Hypothesis Tests

**Hypothesis One: Pet Ownership Effects on the Children.**

Children with pets showed more empathy than those without ($p < 0.05$). There was also a trend for children with pets to have more positive attitudes toward pets and higher verbal intelligence scores.

### Pet Ownership Effects

| | Mean Scores | | T-Test | p. |
|---|---|---|---|---|
| Variable | No Pet | Pet | | |
| Empathy | 1.88 | 2.03 | 2.16 | 0.04 |
| Pet Attitudes | 41.38 | 47.84 | 2.02 | 0.06 |
| PPVT | 107.27 | 114.96 | 1.89 | 0.07 |

**Hypothesis Two: Pet Bonding Effects on the Children.**

**Correlational Results**

**The child's bond with their most important pet was positively correlated with their "reassurance" score ($r = 0.46$, $p < 0.01$), inversely correlated with their "uncooperative" score ($r = -0.35$, $p < 0.05$), and with "social activator" ($r = 0.28$, $p < 0.10$). These results show a beneficial relationship between the child's companion animal bond and the child's social development.**

**The involvement factor of the mothers' ratings of their children's companion animal bond showed even stronger relationships with the Iowa Social Competency Scale scores.**

**One-way Analysis of Variance Results**

**Social Development**

**Children in the strong bond group had a significantly lower score on the mothers' ratings of their children on the ISCS "hypersensitive" scale than the children in the moderate bond group ($F = 3.60$, $df = 2/37$, $p < 0.05$). Similarly, the children in the strong pet bond group had a higher mother ISCS "reassurance" score than the children in the weak and moderate groups ($F = 7.74$, $df = 2/38$, $p < 0.01$).**

**Empathy**

**Young children rated by their fathers as having a strong pet bond were higher on Empathy than children with a weak pet bond ($p < 0.05$) although the overall F-test for the sample was only marginal ($F = 3.30$, $df = 2/16$, $p = 0.06$). A similar result was found on the Empathy subscale pertaining to the children's affective response to another child ($F = 2.72$, $df = 2/16$, $p < 0.10$) where the significant paired comparison was between the strong bond group ($M = 11.40$) and the weak bond group ($M = 9.53$).**

**Peabody Picture Vocabulary Test Results**

While the one-way ANOVA for the standard scores on the Peabody Picture Vocabulary Test, administered during the home visits, only approached significance ($F = 2.67$, $p = 0.10$), the LSD paired comparisons showed a significant difference between those with a moderate bond and those with a strong bond.

This "pet bonding" hypothesis is strongly supported by the significant findings which show social and intellectual development benefits associated with the strength of the bond between the child and his/her pet.

Pet Bonding and Child Development

| | No | ——Pet Bond—— | | | |
|---|---|---|---|---|---|
| Variable | Pet | Weak | Moderate | Strong | p. |
| Hypersensitive | .07 | -.12 | .35 | -.68 | .08 |
| Empathy | 9.40 | 9.70 | 10.25 | 11.40 | .01 |
| Intelligence | 111.25 | 111.00 | 124.20 | 108.83 | .10 |

**Hypothesis Three: Pets and the Quality of Children's Homes**

**Home Environment and Pet Ownership / Bonding**

T-test comparisons of the means for the homes with and without pets yielded no significant differences.

**Family Relationships and Pet Ownership / Bonding**

Fathers without pet in their home had a higher empathy score than fathers with pets (19.95 vs. 18.53, $p < 0.05$) and a higher regard score (23.44 vs. 21.92, $p < 0.05$).

The children with pets were divided into three pet-bonding groups. Those with a moderate bond had fathers who were higher on the "empathy" family relations scale than those with a weak bond ($F = 4.75$, $df = 2/16$, $p < 0.05$). Fathers of children with a moderate pet bond had a higher "regard" score than fathers of the other children ($F = 3.95$, $df = 2/16$, $p < 0.05$). The means for the fathers of children with strong, moderate and weak pet bonds were 21.71, 23.85 and 21.00, respectively.

These results provide evidence of family environment influences which are associated with pet ownership and bonding.

Hypothesis Four: Family Effects on Bonding and the Children

The quality of the children's home environment was positively correlated with the raw score measure of the children's development and the age-adjusted measure of the children's development. The fathers' responses to the survey form of the Environmental Assessment Index was positively correlated with the number of items which the children accomplished on the adapted Denver Prescreening Questionnaire ($r = 0.29$, $p = 0.03$) for the 54 cases where the fathers of children with and without pets responded. The correlation was even stronger for the age-adjusted developmental measure ($r = 0.45$, $p < .01$).

The fathers' home environment rating was positively correlated with their children ISCS "social activator" rating ($r = 0.36$, $p < 0.01$), inversely with "hypersensitive" ($r = -.41$, $p < 0.01$), inversely with "reassurance" ($r = -0.34$, $p < 0.05$) and positively correlated with the mothers' ratings of "social activator" ($r = 0.31$, $p < 0.05$). The mothers' home environment ratings were inversely correlated with fathers' ratings of the ISCS "hypersensitive" ($r = -0.30$, $p < 0.05$) and their ratings of their children's ISCS "social activator" ($r = 0.29$, $p < 0.05$).

## Quality of the Home Environment and Pet Bonding

The fathers' and mothers' estimates of the quality of their home environments was strongly correlated with the home visitor's assessment of the child's pet bond (CABS) (r's = 0.70 and 0.57,respectively, both $p < 0.01$). The mothers' Environmental Assessment Index scores were also correlated with their husband's estimate of the children's pet bond ($r = 0.30$, $p < 0.10$) and significantly correlated with their own estimate of the child-pet bond ($r = 0.32$, $p < 0.05$).

## Bonding, Home Environment and Child Development

Bonding and the quality of the children's home environment, taken together, were found to account for the children's development. The children's successes on our adaptation of the Denver Prescreening Developmental Questionnaire were accounted for by the children's pet ownership / bonding group and home environment (fathers' EAI). This analysis of variance with the children's age as a covariate is summarized below. Children from homes without a pet and from homes with low EAI scores had lower child development scores.

Bonding and Home Environment vs. Child Development
Analysis of Variance with Covariate

| Source | df | F | p |
|---|---|---|---|
| Covariate (age) | 1 | 139.58 | 0.000 |
| Main Effects | | | |
| Bonding | 3 | 2.88 | 0.048 |
| EAI | 1 | 8.95 | 0.005 |
| Interaction | 3 | 2.83 | 0.051 |

Age Adjusted Child Development Scores

Cell Means

| | No Pet | Bond Strength[1] Weak | Moderate | Strong |
|---|---|---|---|---|
| Low EAI | 23.50 | 38.17 | 40.57 | 38.29 |
| High EAI | 40.11 | 42.60 | 35.60 | 40.50 |

[1] Fathers' estimate of Companion Animal Bond.

## SUMMARY

Survey data from 88 parents about themselves, their homes, and their preschool age children provided empirical support for the hypotheses that young children derive developmental benefits from their interaction with their pets. Additional data from home interviews with some of the families provided further support to the general premise that there are developmental benefits of pets for young children. The benefits were primarily, but not exclusively, in the children's social domain including their social competence, empathy, and pet attitudes. "Pet bonding" appeared to be a stronger determinant of the pet associated benefits than "pet ownership." Other family elements including the Environmental Assessment Index measure of the quality of their home environments were associated with both "pet ownership / bonding" and the children's development. Children with pets and children with better home environments had higher age-adjusted child development scores. Further research to replicate these results and clarify their complex linkage is recommended.